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METHOD AND DEVICE FOR ASSESSING THE SUITABILITY OF BIOPOLYMERS

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ABSTRACT:

Disclosed is a method for the identification of one or a small number of molecules, in particular at a dilution of </= 1 mu M, by using laser-stimulated fluorescence correlation spectroscopy with measurement times of </= 500 ms and short diffusion paths for the molecules under analysis, the measurement preferably being carried out on small volumes of </= 10<-14> litres to measure parameters specific to the material and which can be determined by luminescence measurements on the molecules under investigation. The device preferably used to carry out the method proposed has per se prior art microscope optics which focus the laser light used to stimulate the fluororescence of a highly dilute solution in a small measurement cell and to form an image from the emitted light in the subsequent measurement stage by confocal imaging. The optics used have a large numerical aperture of >/= 1.2 N.A., the amount of light is limited by an apertured diaphragm confocally disposed in the plane of the object after the objective lens of the microscope, and the measurement cell is positioned at a distance between 0 and 1,000 mu m from the viewing lens.